# Science with a Mission

Advancing the Energy, Economic, and National Security of the United States

### **USER FACILITIES**

The Department of Energy's Office of Science builds and operates the world's finest suite of scientific facilities and instruments that researchers depend on to extend the frontiers of science.

Each year, these DOE Office of Science facilities are used by more than 19,000 researchers and students from universities, private industry, and other government agencies, including the National Science Foundation and the National Institutes of Health.

These very large and complex machines and instruments have enabled U.S. researchers to make many of the most important scientific discoveries over the past six decades, with spin-off technological advances creating entirely new devices and industries.

The Office of Science's state-of-the-art facilities are located at national laboratories and universities, open to researchers on a peer-reviewed basis, shared with the science community worldwide, and feature technologies and capabilities that are available nowhere else.













#### **20-YEAR FACILITIES OUTLOOK**

The health and vitality of U.S. science and technology depends upon the availability of the most advanced research facilities.

Facilities for the Future of Science: A Twenty-Year Outlook listed 28 new large scientific facilities and upgrades of current facilities that will define scientific opportunities across all fields of science supported by DOE over the next 20 years.

Investment in these facilities will yield extraordinary scientific breakthroughs – and vital societal and economic benefits.



The \$1.4 billion Spallation Neutron Source (SNS) at Oak Ridge National Laboratory, the largest civilian science project in the U.S., was completed in 2006 on time and on budget. The SNS will provide the most intense pulsed neutron beams in the world for scientific research and technology development.

## WHAT DISTINGUISHES THE DOE OFFICE OF SCIENCE?

The Office of Science fills a unique and central role in the Nation's scientific endeavor. Our work is complementary to that of other government research agencies.

We distinguish ourselves by our emphasis on research that:

- > is driven by the Department of Energy missions,
- > takes the long view,
- > is open and interdisciplinary,
- > requires the use of large-scale facilities, and
- > takes risks commensurate with the high pay-offs we expect.

#### **OUR FACILITIES**

The DOE Office of Science facilities include:

- > particle accelerators,
- > synchrotron light sources,
- > neutron scattering facilities,
- > supercomputers,
- > high-speed networks, and
- > genome sequencing facilities.







